

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



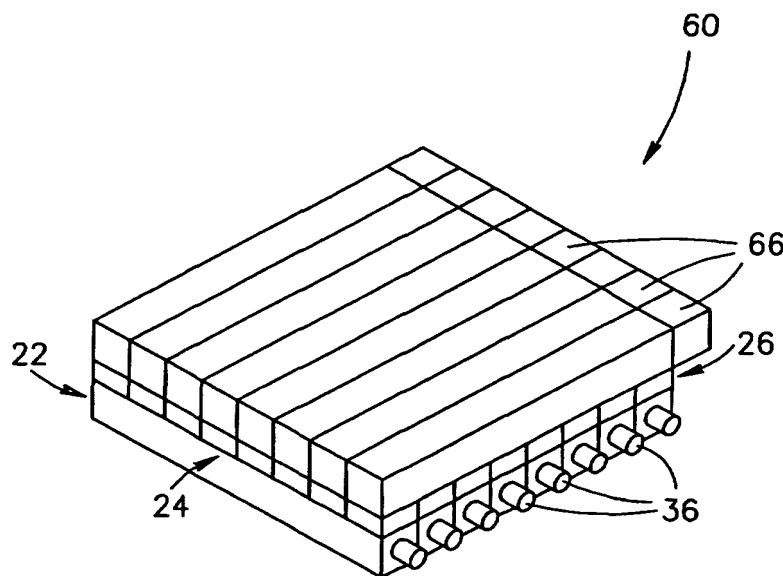
(43) International Publication Date  
8 November 2001 (08.11.2001)

PCT

(10) International Publication Number  
**WO 01/84262 A1**

- (51) International Patent Classification<sup>7</sup>: **G06E 3/00**
- (21) International Application Number: **PCT/IL01/00398**
- (22) International Filing Date: **3 May 2001 (03.05.2001)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:  
135944 **3 May 2000 (03.05.2000) IL**
- (71) Applicant (for all designated States except US): **JTC 2000 DEVELOPMENT (DELAWARE), INC.** [US/US];  
c/o Robinson Silverman Pearce Aronsohn & Berman LLP,  
1290 Avenue of the Americas, New York, NY 10104 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MENDLOVIC, David** [IL/IL]; Idelman Street 9, 49550 Petach Tikva (IL). **LEVAVI, Shay** [IL/IL]; Harofe Street 25, 34367 Haifa (IL). **KONFORTI, Naim** [IL/IL]; Menachem Begin Avenue 36, 58517 Holon (IL). **SARIEL, Aviram** [IL/IL]; Habroshim Street 10/1, 45930 Ramot Hashavim (IL). **HEFETZ, Yaron** [IL/IL]; Shoshanim Street 14, 46492 Herzelia (IL).
- (74) Agents: **FENSTER, Paul et al.**; Fenster and Company Patent Attorneys Ltd., P.O. Box 10256, 49002 Petach Tikva (IL).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO** patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), **Eurasian** patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), **European** patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), **OAPI** patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:**  
— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **OPTICAL LINEAR PROCESSOR**



(57) Abstract: An optical signal processor for transforming a first vector into a second vector comprising: a plurality of linear light sources each of which provides light having an intensity responsive to a different component of the first vector; a spatial light modulator comprising a plurality of modulation zones each of which zones receives light from substantially only one of the light sources and transmits light in proportion to a transmittance that characterizes the modulation zone; and at least one light detector for each component of the second vector that receives light transmitted from a plurality of modulation zones, each of which is illuminated by light from a different light source, and generates a signal responsive to the received light that represents a component of the second vector.

WO 01/84262 A1